

1 5.(currently amended) The method, ~~surface or apparatus~~ of claims 1-4 claim 1-2,
2 wherein the composition comprises a compound having a higher affinity for the metal surface
3 than the sulfiding compound.

1 6.(currently amended) The method, ~~surface or apparatus~~ of claims 1-4, wherein the
2 composition comprises an effective amount of a phosphorus in the form of a phosphorus-
3 containing compound to reduce sulfidation of the metal.

1 7.(currently amended) The method, ~~surface or apparatus~~ of claims 1-4, wherein the
2 effective amount of the phosphorus is between about 0.001 ppm and about 20 ppm in the
3 fluid.

1 8.(currently amended) The method, ~~surface or apparatus~~ of claim 7, wherein the
2 effective amount of the phosphorus is between about 0.01 ppm and about 10 ppm in the fluid.

1 9.(currently amended) The method, ~~surface or apparatus~~ of claim 8, wherein the
2 effective amount of the phosphorus is between about 0.1 ppm and about 5 ppm in the fluid.

1 10.(currently amended) The method, ~~surface or apparatus~~ of claim 8, wherein the
2 effective amount of the phosphorus is between about 0.1 ppm to about 2 ppm.

1 11.(currently amended) The method, ~~surface or apparatus~~ of claim 8, wherein the
2 effective amount of the phosphorus is between about 0.1 ppm and about 1 ppm

1 12.(currently amended) The method, ~~surface or apparatus~~ of claim 8, wherein the
2 effective amount of the phosphorus is between about 0.2 ppm and about 0.8 ppm.

1 13.(currently amended) The method, ~~surface or apparatus~~ of claim 8, wherein the

2 phosphorus-containing compound comprises phosphorus, phosphines of formulas PH₃, PRH₂,
3 PR₂H, and R₃P where each R is the same or different and is a C1 to C20 carbon-containing
4 group including alkyl, aryl, alkaryl or aralkyl; , phosphites including ammonium phosphites;
5 alkali metal phosphites; alkaline metal phosphites; phosphites having organic counter ions;
6 phosphates including ammonium phosphates; alkali metal phosphates; alkaline metal
7 phosphates; phosphates having organic counter ions; pyrophosphates including ammonium
8 pyrophosphates; alkali metal pyrophosphates; alkaline metal pyrophosphates; pyrophosphates
9 having organic counter ions; polyphosphates including ammonium polyphosphates; alkali
10 metal polyphosphates; alkaline metal polyphosphates; polyphosphates having organic counter
11 ions; thiophosphates; thiophoshites; or other phosphorus-containing compounds capable of
12 inhibiting sulfuric corrosion of metal surfaces, or mixtures or combinations thereof.

1 14.(original) A method of pre-treating metal surfaces comprising the steps of:
2 contacting a metal surface with an effective amount of a pre-treating composition
3 sufficient to deposit onto the metal surface a protective coating, where the coating prevents
4 or reduces sulfidation of the metal by deactivating metal sites involved in the formation of
5 atomic sulfur and/or sulfides at or on the surface.

1 15.(original) The method claim 14, wherein the pre-treating composition comprises an
2 organo-phosphorus compound and the method further comprising the step of:
3 oxidizing the organo-phosphorus compound to a phosphorus oxide compound.

1 16.(original) The method claim 14, wherein the composition comprises a compound having
2 a higher affinity for the metal surface than the sulfiding compound.

1 17.(original) The method claims 14, wherein the composition comprises an effective amount
2 of phosphorus in the form of a phosphorus-containing compound.

1 18.(original) The method claims 14, wherein the effective amount of the phosphorus is
2 between about 0.1 ppm and about 5 ppm in the fluid.

1 19.(original) The method claims 14, wherein the effective amount of the phosphorus is
2 between about 0.2 ppm and about 0.8 ppm.

1 20.(original) The method claims 14, wherein the phosphorus-containing compound
2 comprises phosphorus, phosphines of formulas PH₃, PRH₂, PR₂H, and R₃P where each R is
3 the same or different and is a C1 to C20 carbon-containing group including alkyl, aryl,
4 alkaryl or aralkyl; , phosphites including ammonium phosphites; alkali metal phosphites;
5 alkaline metal phosphites; phosphites having organic counter ions; phosphates including
6 ammonium phosphates; alkali metal phosphates; alkaline metal phosphates; phosphates
7 having organic counter ions; pyrophosphates including ammonium pyrophosphates; alkali
8 metal pyrophosphates; alkaline metal pyrophosphates; pyrophosphates having organic
9 counter ions; polyphosphates including ammonium polyphosphates; alkali metal
10 polyphosphates; alkaline metal polyphosphates; polyphosphates having organic counter ions;
11 thiophosphates; thiophoshites; or other phosphorus-containing compounds capable of
12 inhibiting sulfuric corrosion of metal surfaces, or mixtures or combinations thereof.

If it would be of assistance in resolving any issues in this application, the Examiner is kindly invited to contact applicant's attorney Robert W. Strozier at 713.977.7000

Respectfully submitted,



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